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## IS BADIOU A DIGITAL PHILOSOPHER?

PHILOFICTION BADIOU, DIGITAL, NON-PHILOSOPHY

*tl;dr the answer is: 0, 0, 1, 0, and 1. (That's no, no, yes, no, and yes.)*

As with many questions of this nature — where both the vocabulary and the material are subject to interpretation — the answer depends a great deal on how one defines “digital” and how one reads Badiou’s corpus vis-a-vis that definition. So let’s look at a number of different ways to answer the question.

**1) Is Badiou a philosopher of the digital?** If we take a naive definition of the digital as “the tools and technologies of contemporary mass media” we get a naive answer: *no*. Badiou has almost nothing to say about mass media overall, and even less to say about contemporary computation or digitality in particular. Beyond a collection of incidental pieces on cinema, and beyond a series of essays and books on art and aesthetics — a rich body of work focused largely on modernism — Badiou has never written about media as such. (Someone please correct me if I’ve overlooked something.) Of course Badiou himself has written plays and novels, but this, again, does not constitute a theory of media, much less a theory of the digital.



**2) Is Badiou a digital philosopher (where “digital” means number)?** In other words, does

Badiou think that the world, at root, consists of numerical entities and/or numerical calculation? No, not exactly. Badiou may be a Platonist, but he's not a Pythagorean. He's often misunderstood on this point. Badiou never says the world is made of math. He never says being is mathematical. Rather, Badiou claims that ontology is *spoken in the language* of mathematics. The shift in emphasis is slight but hugely important. (Incidentally Deleuze makes the same subtle but profound move from being itself to being as articulation when he says that "being is voice" or that being must be understood as an "expression"; Badiou mocks Deleuze for doing this, making fun of Deleuze's "clamor," but Badiou himself does something very similar albeit in a more strictly nihilist register.) In other words, Badiou claims that whenever anyone says anything of substance in ontology, he or she will typically be deploying the concepts and vocabularies of mathematics. Thus, if ontology poses a question like "what is a thing," Badiou stresses that it's not so much "thing" that's being explained, but "a." A thing. One thing. One. Any ontological conversation will, according to Badiou, necessarily have to explain what "one" means. (There's a longer discussion too around Greek terms like *μάθημα* (*mathema*), *μάθησις* (*mathesis*), *μαθητής* (*mathetes*), which don't in fact refer to "math" or "mathematics" in the modern sense. But we'll have to address that another day.)

**3) Is Badiou a digital philosopher (where "digital" means discrete entities)?** In other words, does Badiou think that the world, at root, consists of discrete things? Yes, in a manner of speaking, he does. For Badiou, everything described by ontology is a *set*, or what Badiou prefers to call a multiplicity. "Ontology," Badiou wrote in *Being and Event*, is "*the theory of inconsistent multiplicities as such*" (28). This is not to say that multiplicities are necessarily discrete entities in the traditional sense of objects, things, people, trees, etc. Badiou is fully aware of the radically anti-essentialist and anti-identitarian nature of the set, as facilitated primarily by set theory's Axiom of Extension. Sets don't stipulate what they contain. It's a "flimsy" concept in this sense. Sets can and will consist of radically heterogeneous things. Badiou is vigilant on this point; he goes to great lengths to show how a set is not "one," that it only "counts as one," that the oneness of a set is merely an after effect or epiphenomenon. Still, no matter how heterogenous their members may be, sets are indeed discrete things. In the most primitive sense, sets are elaborate ways of defining what 1, 2, or 3 actually means, and onward to a limit number  $n$ . Sure, set theory has a lot to say about different number systems, and the real numbers enforce the law of continuity rather than the law of discretization, but set theory privileges the natural numbers to the extent that natural numbers drive the concept of both ordinal numbers and cardinal numbers. For instance, the cardinality of a set is an integer, not, say, a real number. (Perhaps there's some exotic flavor of set theory unknown to me in which a set may have a cardinality of  $\pi$ , but if such a mathematics exists it's certainly not informing Badiou's ontology.)

In short, everything described by simple ontology is a multiplicity (a set). It would not be incorrect, then, to describe Badiou as a kind of monist — if we confine ourselves to being. But it's a very strange kind of monism because it's a monism *without the one!* We will see in a moment, however, that Badiou's putative monism of the multiple is something of a foil, because beyond being lies something else entirely. The event represents a radical break (i.e. a discretization) from mere being. In this way, both the beings that make up being are digital, and the sheer fact of an event that departs trenchantly from being is also digital.

**4) Is Badiou excited by the digital?** Clearly not. Badiou may think in terms of a macro structure of digitality, but the thing that really moves him, the pivot on which all of *Being and Event* turns, is the continuum. The continuum, and moreover the repercussions precipitated by the continuum. But how? A bit of background is necessary first...

On several occasions Badiou mentions (and, in so doing, reiterates and endorses) the classic distinction between arithmetic and geometry. These two ancient modes of mathematics appear and reappear throughout history, sometimes brought together as one thought, sometimes irrevocably separated. Arithmetic is when you count on your fingers. Thus for Badiou, as for Leibniz, Plato, and others before him, arithmetic means numerical discretion. Arithmetic is the domain of the simple, natural numbers, the domain of counting. Arithmetic is about discontinuousness — even the rational numbers are "discontinuous" in this sense (to see why, simply compare them to the real numbers). And while the concept of infinity is fully thinkable within the arithmetic mode, arithmetic concerns a concept of infinity as countable, the so-called "little" infinity or "natural" infinity described by Cantor, the one he defined in terms of the cardinality — or "size" — of the integers. In recent years we've developed a new word for all of this. The word is "digitality."

If arithmetic starts with one's fingers, geometry starts with a compass or a string. (Didn't Euclid say as much?) Geometry is the domain of quantity and proportion within the mathematical continuum, not simply the domain of the counting numbers or even the rational numbers. Of course Descartes managed to "algebraicize" geometry, and there are aspects of graph theory that are quite digital, but overall geometry is the domain of the continuous: the unbroken line, the infinite extension, or that most beautiful thing of all, the curve. Cantor distinguished countability from uncountability, that is, a "little" infinity (the infinity of the integers) distinguished from a qualitatively "larger" infinity (the infinity of the real numbers). Such is the basis of his famous Continuum Hypothesis, the notion that there is no number, no cardinality, between the totality of the integers and the real numbers. Today we use a specific word to describe the real continuum: "analogicity" or simply "the analog."

What else can we say about these two modes? I've always loved that line in *The Archaeology of Knowledge* where Michel Foucault recollects an "old Greek adage" about how "arithmetic should be taught in democracies, for it teaches relations of equality, but that geometry alone should be reserved for oligarchies, as it demonstrates the proportions within inequality." What an outrageous claim! And all the more interesting because of it: democracy is arithmetical, while oligarchy is geometric.

Or consider the wonderful passage from John Durham Peters' new book, where he glosses the distinction in Greek mathematics

between geometry and arithmetic:

The difference between number and quantity was an important discovery in ancient Greek mathematics, and was also the basis of the separation of geometry, which handles continuous quantities, and arithmetic, which handles discrete ones. Quantity is not the same thing as number. The diagonal of a square with sides of 1 is the square root of 2. The sound of a perfect fourth is perfectly audible. Both quantities are real and measurable, but impossible to represent arithmetically without approximation. ... The contrast of analog and digital goes back to the contrast of geometry and arithmetic. (*The Marvelous Clouds*, 183-184)

This pertains to the canonical history of mathematics. But what's Badiou's contribution? Badiou superimposes a new set of terms over the pairings of digital/analog, arithmetic/geometric, rational/real, set/power set, natural infinity/real infinity, etc. Badiou assigns the term "situation" to the first part of the pair — so the set, the rational, the arithmetic, etc., are also called "the situation" — and he assigns "state" (or the synonyms "state of the situation" and "metastructure") to the second part of the pair — so the power set, the real, etc. are also called "the state." This I find truly wild and daring. Lesser thinkers would do it differently, they would make the power set and the real the *privileged* terms and make nature, the rational, and the discontinuous the *degraded* terms. Recall the normal conventions of critical theory: the problems of modern life are due to things like rationalization, fragmentation, quantification, or the naturalization of abstraction. Whereas hope is found in continuity, reality, and the "uncountable." Or rendered as a slogan: *only the continuum will save us!* A more naïve thinker than Badiou would most certainly latch onto "power set" as some kind of silly metaphor for liberation: *power set to the people!* But Badiou doesn't do this. In fact he does the reverse, and in so doing ends up affirming some rather astounding theorems, such as the fact that the state is *qualitatively more massive* than the situation. In other words, there's no way to take the local mathematics of the situation and use it to count — simply to count! — the state. Talk about killing hope. The state is the power set, meaning it's *immeasurably* larger.

**5) Does digitality govern Badiou's theory of being?** "Only the continuum will save us" — Badiou never says this. In fact he explicitly rejects such a position as hopelessly poetic or romantic. That's the kind of thing Heidegger would say, or perhaps Deleuze — two lost souls from whom Badiou constantly differentiates himself. But if Badiou never says "only the continuum will save us," if Badiou never plays the analog card, it's because he wants to do something even more provocative, something even more extreme. *Only choice will save us.* Remember existentialism? It's back, only with a new twist. Mathematics doesn't give the answers so much as gesture toward a yawning gulf of unanswerability (the abyss between natural and real infinity identified in *Being and Event* during the action-packed Meditations 26 and 27), and from within the black hole of unanswerability — the indiscernible, the uncountable, the immeasurable, the generic — the subject is forced to make a choice. In short, math births subjects. And number wins in the end.

With this in mind I suspect that, *overall*, Badiou is a digital philosopher. Indeed, he's one of the big ones. The key is how he defines being, and more importantly how he talks about the deviation from being. Badiou certainly has an intimate knowledge of both the discrete and the continuous — indeed *Being and Event* largely turns on Badiou's interpretation of Cantor's Continuum Hypothesis (which, by the way, Badiou endorses, undistracted by the hypothesis's famous "independence" from set theory). Three points to summarize: (1) originally designed as a tool for exploring "real" infinity, set theory nevertheless privileges discrete number; (2) the Continuum Hypothesis, despite its name, endorses an elemental and insurmountable *discontinuity* (that between aleph-zero and its power set); and (3) the structure of being is, for Badiou, rooted in distinction (the event as that which departs immeasurably from being). Any thinker of the break, anyone who is as much of a *modernist* as Badiou, will necessarily be a digital philosopher. So, while the analog appears from time to time, and the continuum has its role to play in *Being and Event*, the guiding principle in Badiou is overwhelmingly a digital one. Let's not forget that Badiou is a metaphysician — proudly so — and metaphysics has always been the natural domain of digital philosophy. So it's no surprise that, *overall*, Badiou is firmly in the digital camp.

Not that digitality is necessarily something to be avoided. But to find a truly analog way of thinking we will have to look elsewhere than metaphysics. And to find an entirely non-digital way of thinking — which would necessarily be non-analog as well — we will have to look elsewhere than philosophy as a whole.

(Postscript: This post stems from a recent reread of *Being and Event*. I'm currently writing an essay on Badiou for a friend — not on this topic but on a related one — and thus will hopefully post more thoughts on Badiou as they appear.)

Table of Concepts

	what we call "digitality"	what we call "analogicity"
mathematical mode:	number	quantity/proportion
practical mode:	counting	measurement
core concept:	numerical discretization	geometrical continuum
ur-field:	arithmetic	geometry
governmental mode:	"relations of equality" (aka democracy)	"proportions within inequality" (aka oligarchy)
formal mode:	the discontinuous	the continuous
in number theory:	rational numbers	real numbers

<b>in set theory:</b>	belonging	inclusion
<b>cardinality:</b>	natural infinity	real infinity
<b>ordinality:</b>	the countable	the uncountable
<b>in Cantor:</b>	the set (example: $n$ or $\aleph$ )	the power set (example: $2^n$ or $2^{\aleph}$ )
<b>in Badiou:</b>	situation	state of the situation (aka state or metastructure)

taken from here

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